AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, or claims in the application.

1. – 10. (Cancelled).

11. (Currently amended) An artificial full-thickness corneal transplant support ~~comprising~~ consisting essentially of:

a) a base biopolymer having the thickness of approximately an average cornea;

b) said biopolymer having incorporated within it an attachment reagent comprising one or more of the following: laminin, fibronectin, RGDS (SEQ ID NO: 1), bFGF conjugated with polycarbophil, and EGF conjugated with polycarbophil~~, and heparin sulfate~~; and

c) said biopolymer having the shape of a cornea, with a convex and concave side and suitable for implantation onto a damaged cornea.

12. (Original) The composition of claim 11, wherein the biopolymer is comprised of collagen IV.

13. (Currently amended) An artificial full-thickness corneal transplant ~~comprising~~ consisting essentially of:

a) a base biopolymer having the thickness of approximately an average cornea;

b) said biopolymer having incorporated within it an attachment reagent comprising one or more of the following: laminin, fibronectin, RGDS (SEQ ID NO: 1), bFGF conjugated with polycarbophil, and EGF conjugated with polycarbophil~~, and heparin sulfate~~;

c) said biopolymer having the shape of a cornea, with a convex and concave side;

d) a confluent layer of human corneal endothelial cells on ~~said~~ the convex side of the biopolymer;

e) said transplant suitable for implantation onto a damaged cornea.

14. (Currently amended) An artificial half-thickness corneal transplant support ~~comprising~~ consisting essentially of:

a) a base biopolymer having the thickness of approximately one half the thickness of an average cornea;

b) said biopolymer having incorporated within an attachment reagent comprising one or more of the following: laminin, fibronectin, RGDS (SEQ ID NO: 1), bFGF conjugated with polycarbophil, and EGF conjugated with polycarbophil, ~~and heparin sulfate~~; and

c) said biopolymer having the shape of a cornea, with a convex and concave side and suitable for implantation onto a damaged cornea.

15. (Currently amended) An artificial half-thickness corneal transplant ~~comprising~~ consisting essentially of:

a) a base biopolymer having the thickness of approximately one half the thickness of an average cornea;

b) said biopolymer having incorporated within an attachment reagent comprising one or more of the following: laminin, fibronectin, RGDS (SEQ

ID NO: 1), bFGF conjugated with polycarbophil, and EGF conjugated with polycarbophil, ~~and heparin sulfate~~;

c) said biopolymer having the shape of a cornea with a convex and concave side; ~~and~~

d) a confluent layer of human corneal endothelial cells on said biopolymer;

e) said transplant suitable for implantation onto a damaged cornea.

16. (Original) The artificial cornea of claim 15 wherein the biopolymer is collagen IV.

17. (Currently amended) The artificial ~~cornea~~ corneal transplant support of claim 11, wherein the biopolymer is non-swelling in the presence of culture media.

18. – 26. (Cancelled).

27. (New) The artificial full-thickness corneal transplant support of claim 11, wherein said biopolymer is coated with diamond like carbon.

28. (New) The artificial full-thickness corneal transplant of claim 13, wherein said biopolymer is coated with diamond like carbon.